

Title (en)
HEAT EXCHANGER, AIR CONDITIONER, AND COOLING UNIT

Title (de)
WÄRMETAUSCHER, KLIMAAANLAGE UND KÜHLEINHEIT

Title (fr)
ÉCHANGEUR DE CHALEUR, CLIMATISEUR ET UNITÉ DE REFROIDISSEMENT

Publication
EP 3742083 A4 20210303 (EN)

Application
EP 18901794 A 20181211

Priority
• CN 201810045147 A 20180117
• CN 2018120269 W 20181211

Abstract (en)
[origin: EP3742083A1] A heat exchanger includes a heat exchange tube (10) and a first water collecting tank (20). The first water collecting tank (20) is provided on the heat exchange tube (10), a first water diversion hole (21) is provided at a bottom portion of the first water collecting tank (20), the heat exchange tube (10) passes through the first water diversion hole (21), and the first water diversion hole (21) has a diameter greater than an outer diameter of the heat exchange tube (10). By providing the first water collecting tank (20), and making the heat exchange tube (10) pass through the first water diversion hole (21) provided on the first water collecting tank (20), and leaving a gap between the heat exchange tube (10) and the first water diversion hole (21), the water in the first water collecting tank (20) evenly flows into the first water diversion hole (21). Since the gap is smaller, the water flow can pass through the gap, and then can adhere to the heat exchange tube in the first water diversion hole (21) after the water flow passes through the gap, which is beneficial to forming a water film on an outer surface of the heat exchange tube (10), thereby improving the heat exchange efficiency.

IPC 8 full level
F25B 39/00 (2006.01)

CPC (source: CN EP US)
F25B 39/00 (2013.01 - CN EP US); **F28D 1/05316** (2013.01 - CN EP); **F28D 1/05333** (2013.01 - EP); **F28D 3/04** (2013.01 - EP); **F28D 5/02** (2013.01 - EP); **F28F 9/0275** (2013.01 - CN); **F28F 17/005** (2013.01 - EP US); **F25B 2500/09** (2013.01 - CN); **F28D 1/05316** (2013.01 - US); **F28D 3/02** (2013.01 - EP); **F28D 2021/0061** (2013.01 - EP); **F28D 2021/007** (2013.01 - EP); **F28D 2021/0084** (2013.01 - EP US); **F28D 2021/0085** (2013.01 - EP US); **F28F 9/0275** (2013.01 - EP US); **F28F 25/02** (2013.01 - EP); **F28F 2025/005** (2013.01 - EP)

Citation (search report)
• [X] US 2004007349 A1 20040115 - YOUN BAEK [KR], et al
• [X] JP S5862494 A 19830413 - HITACHI LTD
• [A] CN 202350567 U 20120725 - SICHUAN YIBIN WULIANGYE GROUP, et al
• See references of WO 2019141022A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
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DOCDB simple family (publication)
EP 3742083 A1 20201125; EP 3742083 A4 20210303; EP 3742083 B1 20220202; CN 108168150 A 20180615; CN 108168150 B 20191227; US 11639817 B2 20230502; US 2021080158 A1 20210318; WO 2019141022 A1 20190725

DOCDB simple family (application)
EP 18901794 A 20181211; CN 201810045147 A 20180117; CN 2018120269 W 20181211; US 201816961697 A 20181211